

ABSTRACT

A semiconductor wafer cleaning formulation comprising an unsaturated dicarboxylic acid and ethylene urea, and a cleaning method are provided. The formulation comprises an unsaturated dicarboxylic acid and ethylene urea as essential components, and is used for removing residues in semiconductor fabrication. As the unsaturated dicarboxylic acid, maleic acid is particularly preferable. The preferred formulation comprises an unsaturated dicarboxylic acid, ethylene urea, at least one organic carboxylic acid except unsaturated dicarboxylic acid, at least one basic compound except ethylene urea and water. The formulation can optionally comprise at least one selected from the group consisting of an organic solvent, a chelating agent, a surfactant, and phosphonic acid and/or phosphinic acid.